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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,352	09/30/2003	James P. Luther	HE0207	9397

21495 7590 08/18/2005

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EXAMINER	
KALIVODA, CHRISTOPHER M	
ART UNIT	**PAPER NUMBER**
2883	

DATE MAILED: 08/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/675,352	LUTHER ET AL.	
	Examiner	Art Unit	
	Christopher M. Kalivoda	2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 July 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) *5-20 and 23-35* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,21 and 22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *09/30/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election of species A, embodiment 1, without traverse in a paper submitted on July 8, 2005 is acknowledged. The requirement is still deemed proper and therefore made final.

Claims 5-20 and 23-35 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on July 8, 2005.

Furthermore, Examiner agrees claim 1 is generic and inadvertently indicated it appeared not generic in the previous office action.

Claims 1-4, 21 and 22 are related to Species A, Embodiment 1 or generic and were examined.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cairns, U.S. Patent 6,439,778.

Regarding independent claims 1, 21 and 22, Cairns teaches a fiber optic connector (Fig 3 and 4 are left and right half of connector) comprising: a multi-fiber

ferrule (col 4, lines 7-9 and Fig 3, ref sign 18) movably disposed within the connector (col 4, lines 26-29) having an end face (Fig 3, ref sign 34) and an opposed rear face (Fig 3, ref sign 30, left side), the ferrule having a plurality of optical fiber bores extending therethrough (col 4, lines 10-15) for receiving the end portions of respective optical fibers adjacent the end face, the end face defining a plane that is generally perpendicular to each of the optical fiber bores (Fig 3, ref sign 34), the ferrule further having at least one guide pin hole (Fig 3, ref sign 36) for receiving a guide pin (Fig 4, ref sign 84) to align the multi-fiber ferrule with a mating multi-fiber ferrule (Fig 4, ref sign 64), the guide pin hole defining an axis that is parallel to each of the optical fiber bores (Fig 3, ref sign 36 and 54, the axis of which are both parallel to each other), the fiber optic connector defining a longitudinal axis that is generally parallel to the axis defined by the guide pin hole or fiber bores (Fig 3, ref sign 36, the axis of which is parallel to longitudinal axis of connector which is the same as the ribbon fiber 54) and at least one force centering element or means (col 4, lines 15-20 and Fig 3, ref sign 44 curved portion) for applying a resultant biasing force to the ferrule in the direction of the longitudinal axis or axial direction parallel to each of the optical fiber bores such that the ferrule is not subjected to a moment about a lateral axis defined by the end face of the ferrule and generally perpendicular to the longitudinal axis.

While the reference does not explicitly state "moment about a lateral axis", it is obvious or well known to one of ordinary skill in the art at the time the invention was made that a moment is also known as a torque.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have at least one force centering element or means for applying a resultant biasing force to the ferrule in the direction of the longitudinal axis or axial direction parallel to each of the optical fiber bores such that the ferrule is not subjected to a moment about a lateral axis defined by the end face of the ferrule and generally perpendicular to the longitudinal axis.

The motivation is to reduce the risk of misalignment between optical contacts and avoid torque or twisting forces which may result in improper alignment (col 1, lines 61-65).

Regarding claim 2, there is a spring seat (Fig 3, ref sign 44) having a forward portion (Fig 3, ref sign 48) that engages the rear face of the ferrule and a rearward portion (Fig 3, refs sign 44 curved portion) opposite the forward portion and wherein the rearward portion comprises the at least one force centering element.

Regarding claim 3, the force-centering element is disposed medially on the rearward portion (since it's symmetric) and comprises a protrusion that extends outwardly from the rearward portion (Fig 44, curved portion).

Regarding claim 4, the protrusion engages a coil spring (Fig 3, ref sign 40) that exerts the biasing force on the ferrule and wherein the forward portion engages the rear face of the ferrule to transfer the biasing force to the ferrule(Fig 3, ref sign 48).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 6,648,520 describes a fiber optic connector comprising a multi-fiber ferrule with end faces and defining a plurality of optical fiber bores extending therethrough. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Kalivoda whose telephone number is (571) 272-2476. The examiner can normally be reached on Monday - Friday (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cmk
08/15/05

KAVEH KIANNI
PRIMARY EXAMINER